Unit title	Unit 9: IT Project Management
Guided learning hours	90
Number of lessons	45
Duration of lessons	2 hours

Key to learning opportunities			
IA	Internal assessment	**RS**	Revision session
GS	Guest speaker	**V**	Visit
IS	Independent study	**C**	Classroom activities directed by teacher

Issue 1 – May 2024 © Pearson Education Limited 2024

Lesson	Topic	Lesson type	Suggested activities	Resources
Learning aim A: Investigate the principles and methodologies of IT project management as used in industry				
1	**Introduction to unit**	IS C	• **Tutor-led discussion:** Begin by introducing project management, the key components of projects and some of the reasons why projects fail. • **Individual activity:** Learners carry out an initial skills audit. What skills do they have in relation to the skills required of a project manager? (Behaviours should be added to produce a combined list of skills and attributes to be used by learners individually). To enable learners to respond at this stage, give them a ranking system or sliding scale for making their initial assessments. Learners to submit a summary of skills audit to tutor to be used at the end of the unit (in learning aim D), when learners will repeat this exercise to show how far they have come over the course of the unit. • **Individual or pair activity:** Learners explore project management software such as Microsoft Project, Freedcamp or Basecamp (or other suitable software). Using these tools is optional, but learners should have an awareness of their features and functionality.	• Whiteboard and computer. • Prepared skills and behaviours audit documents. • Access to the internet. • Access to any centre-owned project management software.

Lesson	Topic	Lesson type	Suggested activities	Resources
			• **Stretch:** Learners should write a brief review of the various software, identifying key positives and negatives for the user. Learners can also make comparisons between the software by identifying key similarities and contrasts. • **Homework:** Students to think about how projects are structured (setup, planning, development, reviews, etc.). This will provide a basis for study or discussion for the start of the next session.	
2	**A1 Project definitions**	GS C	• **Tutor-led discussion:** Define the term 'project' and explore some of the IT projects that are common in the sector. Class to produce a mind map that summarises the various projects they have identified. • **Tutor-led presentation:** Introduce the stages of the project lifecycle as a presentation, allowing each phase to be delivered and discussed in turn. (The definition of project management itself was covered in the introduction in week 1). • **Guest speaker:** Arrange for a guest speaker who works in industry as a project manager to present to learners. The visit should include a Q&A session to give learners the opportunity to ask questions and enhance	• Whiteboard and computer to project presentation. • Invited guest speaker.

Lesson	Topic	Lesson type	Suggested activities	Resources
			their understanding of the role. Learners to take notes and produce a written summary of the session for reference. • **Individual Activity:** Students to formalise and type up the notes from the guest speaker to use as reference.	
3-4	**A2 Characteristics of project management methodologies** Projects IN Controlled Environments (PRINCE2®)	GS C	• **Guest speaker:** If possible, arrange for a guest speaker from ILX Prince2® to explain the main characteristics of this methodology to learners. Learners should be encouraged to take part in a Q&A session with the guest speaker. • **Small group activity:** Tutor to download several of the Prince2® case studies. Each group should create and deliver a PowerPoint presentation to the class that explains how Prince2® was used to manage the projects. • **Individual activity:** Learners complete their electronic methodologies table with the key points of their research.	• Invited guest speaker. • Internet access for research. • Access to computers and the electronic methodologies table. • Case studies saved as PDF documents.
5-6	**A2 Characteristics of project**	IS C	• **Small group activity/project:** Using the groups' research from the week 3 small group activity, learners are to plan, design and create a visual media artefact	• Access to animation tools, video

Lesson	Topic	Lesson type	Suggested activities	Resources
	management methodologies Projects IN Controlled Environments (PRINCE2®)		(no sound) that demonstrates their understanding of the Prince2® methodology, enhancing it by referring to the case studies. Learners should include the pros and cons of Prince2® as a methodology. Learners can choose between several possible media; it could be an animation or video, or learners could make use of other suitable visual media. The artefact should be presented to the class for feedback. • **Homework activity:** Students to research and produce a brief leaflet on the benefits of rapid application development and it uses. As well as introducing the methodology, the leaflets can be displayed on classroom walls in the next session.	cameras or other suitable tools. • Access to relevant media to watch the digital artefact.
7	**A2 Characteristics of project management methodologies** Rapid application development (RAD)	IS C	• **Tutor-led presentation:** Introduce the methodology and its tools and characteristics. • **Individual activity:** The RAD methodology makes use of CASE tools. What are they? Find out and write a definition.	• Computers with internet access. • Access to word processing software.

Lesson	Topic	Lesson type	Suggested activities	Resources
			• **Small group activity:** learners work in small groups to explore the programming/development software they use in class to identify the RAD tools. Learners collaborate to create a short user guide that demonstrates some of the key tools, explains how they are used and how they contribute to the mechanics of the RAD methodology. • **Individual activity:** Learners complete their electronic methodologies table with the key points of their research.	
8	**A2 Characteristics of project management methodologies** Rapid application development (RAD)	IS C	• **Small group activity/project:** Using the groups' research from the week 5 small group activity, learners are to plan, design and create an audio media artefact (no visual content) that demonstrates their understanding of the RAD methodology, enhancing it by referring to case studies where possible. Learners should include the pros and cons of RAD as a methodology. Learners can choose between several possible media, but it is likely to be a podcast or a pre-recorded radio segment involving a simulated interview with a	• Access to recording or other suitable tools to create an audio product. • Access to relevant media to listen to the digital artefact.

Lesson	Topic	Lesson type	Suggested activities	Resources
			specialist, with the presenter asking questions and the specialist responding. The artefact should be presented to the class for feedback. • **Class Activity**: Students complete Kahoot quiz on RAD methodology. • **Stretch Activity**: Students to be given a set scenario for application development. Here, learners can pitch whether they think the RAD approach is correct for each scenario and should justify their reasons. This can then be presented back to the class, providing stretch work for stronger learners and reinforcement for other learners.	
9	**A2 Characteristics of project management methodologies** Waterfall	IS C	• **Individual activity:** Learners research the waterfall model, which is widely used for software development projects. • **Tutor-led class discussion**: One of the key disadvantages of this methodology is the difficulty of managing any changing requirements during development. What techniques should be used to manage the expectations of a project client?	• Computers with internet access.

Lesson	Topic	Lesson type	Suggested activities	Resources
			• **Individual activity**: Learners complete their electronic methodologies table with the key points of their research.	
10	**A2 Characteristics of project management methodologies** Waterfall	IS C	• **Small group activity/project:** Using the research from the week 7 individual activity, learners are to plan, design and create a text media artefact (this can include diagrams) that demonstrates their understanding of the waterfall methodology, enhancing it by referring to case studies where possible. Learners should include the pros and cons of waterfall as a methodology. Learners can choose between several possible media, but it is likely to be a webpage, social media article, news article or practitioner guide. The artefact should be presented to the class for feedback.	• Computers with internet access. • Software to create the text-based artefact. • Access to relevant media to view the digital artefact or hard copy to distribute to the class.
11-12	**A2 Characteristics of project management methodologies**	IS C	• **Small group activity:** The Agile methodology has a number of variants based on the same basic Agile principles. In this activity, learners will work in small groups to research one of the two most common Agile	• Computers with internet access.

Lesson	Topic	Lesson type	Suggested activities	Resources
	Agile		methodologies (see below) and prepare materials that they will use to 'teach' the other groups: ○ Scrum ○ Lean software development In both cases, the materials produced should cover the basics of the Agile methodology before focusing on the variant the group has been allocated and providing pros and cons for each version. Learners are completely free to choose the materials that they will develop. The tutor could challenge learners to come up with a teaching method that they themselves would like to be taught with. Once learners have completed the research, they will 'teach' their colleagues, with their tutor acting as a learner and asking questions in a 'viva'-style Q&A session. • **Individual activity:** Learners complete their electronic methodologies table with the key points of their research.	• Computers with suitable software to support the creation of the materials.

Lesson	Topic	Lesson type	Suggested activities	Resources
13	**A2 Characteristics of project management methodologies** Agile	IS C	• **Small group activity/project:** Using the groups' research from the week 9 small group activity, learners are to plan, design and create a PowerPoint presentation that demonstrates their understanding of the Agile methodology, enhancing it by referring to case studies where possible. Learners should include the pros and cons of Agile as a methodology. The learners should present their PowerPoint slides to the class for feedback. • **Individual activity:** Learners use the resources developed in previous lessons and their electronic table of information to compare the four methodologies. The article should be published on a class social media page. Tutors should encourage and monitor constructive comments and evaluation of fellow learners' work on the chosen social media platform. • **Homework:** Students to create a complete information poster on the differences between project development methodologies.	• Computers with internet access. • Computers with suitable software to create a presentation slide show.

Lesson	Topic	Lesson type	Suggested activities	Resources
14	**A3 Project management structures**	IS C	• **Tutor-led presentation:** This should focus on user requirements and teach learners how to define functional and non-functional requirements of the proposed system. This will lead to a discussion on how these requirements will form a checklist against which the project will be reviewed. • **Small group activity:** The tutor will provide a list of the types of job roles and stakeholders that would be involved in a development project. There are eight key roles and two stakeholders on the list. Each small group should select one of the eight key roles and one of the stakeholders on the list to research. The learners should collaborate within their group to write a job description for their chosen job role, which will be combined with the job descriptions written by their colleagues to be placed in a job bank. • **Tutor-led discussion:** To complete this learning aim, the tutor should cover quality assurance and the need for quality to be maintained throughout the project; why it is important to test the product in a secure environment (usually completely separate from the	• Computers with internet access. • Job description template (on paper or electronically). • Access to word processing software.

Lesson	Topic	Lesson type	Suggested activities	Resources
			main business systems – this is known as sandbox testing); and how deployment should be achieved through either phased implementation (time-based or based on a selection of functional business areas) or whole-scale transition.	
15-17	**Learning aim A - Assessment**	IA	• **Assignment 1:** A written report on the investigation of principles and methodologies of IT project management as used in industry, using at least three different IT projects as case studies. • **Homework**: Students to come up with general ideas for projects to be started in the next lesson. This is beneficial as it will take less time to come up with ideas in the following sessions.	• Assignment brief. • Access to computers with internet access. • Access to computers with relevant software to support the assessment.
Learning aim B: Carry out a project initiation for an IT project				

Lesson	Topic	Lesson type	Suggested activities	Resources
18-20	**B1 Project idea generation and solution creation**	IS C	• **Tutor:** For the review stage of their project development, learners will need to reflect on the process. To this end, learners would benefit from being asked to create a personal reflective project log. This is not compulsory, but it will help learners to think carefully about the processes and the decisions they make, as well as allowing them to record and comment on any issues that emerge. • **Tutor-led discussion:** In the IT world, it would be unusual for the project initiator to simply choose to generate an idea; more likely, the idea will come from an emerging business need or problem. To help learners to work with an initial idea, the tutor can offer some possible options, The tutor should prepare some criteria and components (e.g., number of technical support requests in an Apple store on different days of the week; number of users who might want to use an online polling system) for the initial project idea, which learners can extract as part of the feasibility study. Introduce the ideas and organise the learners into small groups. There should be enough groups/projects	• Personal log template. • Computers with access to the internet. • Computers with relevant software.

Lesson	Topic	Lesson type	Suggested activities	Resources
			to enable each suggested project to be considered by at least two different groups. • **Small group activity:** Learners choose (or are allocated) a project idea to explore. They investigate the problem using any appropriate research tools (internet, journals, libraries, etc.), to check their understanding and explore any existing systems that could be emulated (and/or improved). They should use a range of creativity tools, as outlined in the specification, to consider the project idea from different perspectives. They should then define the problem, scoping the project parameters, identifying and recording the key processes and outlining any resource implications or other costs. Diagrams can be used to articulate the problem and the learners' understanding of it. Each group should record these key points in a document, and then share them with the class. This will give the class an opportunity to consider each of the project ideas covered from two perspectives. How similar/different are they? Are there any points that were missed by one or other group? Each group should	

Lesson	Topic	Lesson type	Suggested activities	Resources
			be allowed to tweak their project idea but should stay with the core concepts. • **Stretch:** Students who finish early should pitch an alternative solution to the one that they have chosen to implement. This will help to teach learners that often there isn't a one-size-fits-all solution for projects – learners MUST consider the benefits and shortfalls of these alternative solutions to show that they grasp this concept.	
21-23	**B2 Feasibility study**	IS C	• **Tutor-led presentation:** This presentation should prepare learners to undertake a feasibility study. It should cover the content as listed in the specification and be supported by a feasibility study template, which the learners should use to record their study. Learners should use the template to record their thoughts in note form under each section (it is not necessary for them to produce a full written document for this practice activity). • **Small group activity:** Learner's work within their groups to carry out a feasibility study. The study should include at least two recommendations about possible solutions (this could include purchasing existing	• Computers with internet access. • The feasibility study template. • Access to computers with relevant software.

Lesson	Topic	Lesson type	Suggested activities	Resources
			software compared with developing a new solution – this means that learners will be able to carry out some very basic costing). This information could be fed back via Padlet. • **Tutor activity:** The tutor should review these feasibility studies, this does not mean marking them per se, but should simply be used as an opportunity to ensure that learners are on the right track before, they move to the activity on project requirements in the next session. • **Homework/stretch**: Since feasibility studies will be reviewed by the next lesson, learners should have the opportunity to take and review each other's feasibility studies. As well as gaining a broader insight into these studies, learners may pick up on the strengths and weaknesses of their own studies before the next lesson.	
24-25	**B3 Project requirements**	IS C	• **Tutor-led discussion:** The tutor will return the feasibility studies to the groups with any feedback or suggestions and then walk them through a project requirements document template. The format for this	• Reviewed feasibility studies.

Lesson	Topic	Lesson type	Suggested activities	Resources
			is not prescribed, but at a minimum, it should include the content listed in the specification. • **Small group activity:** Learners work in groups to formalise the project requirements in line with the research and feasibility study previously carried out. The sections should be completed in note form but should also include at least two visual elements from those listed (diagrams, sketches, storyboards, photographs). The document should contain: o Introduction o Description o Requirements specification (including designs, interfaces, functionality, etc.) o Success criteria During this activity, the tutor should provide advice and guidance to the groups as needed.	• Computers with access to the internet. • Diagramming software.
Learning aim C: Carry out the planning, execution, monitoring and controlling of an IT project, using an appropriate methodology				
26	**C1 Project phasing**	IS C	• **Tutor-led presentation:** The tutor should prepare and deliver a short PowerPoint presentation: What are functional and non-functional requirements?	• Computers with internet access.

Lesson	Topic	Lesson type	Suggested activities	Resources
			• **Paired activity:** Learners work in pairs to identify either the functional or non-functional requirements in relation to a case study prepared by the tutor. • **Small group activity:** Learners return to their working groups and produce functional and non-functional requirements list from the project requirements document created in previous lesson. Once completed, the group should share what they have classified as functional or non-functional by reading through their lists with their class. The class can effectively act as a sense check, querying anything that they think may have been incorrectly classified.	• Access to computers with relevant software.
27-28	**C2 Typical project management processes** Planning and monitoring project-management processes	IS C	• **Tutor-led discussion:** Introduce learners at top level to the typical project management processes that are listed at the start of this learning aim in the specification. These five elements will be explored in more detail in this lesson and over the next two lessons, but this introduction provides context for the learning activity. • **Paired or small group activity:** As practitioners in the sector, learners will need to become resourceful and will need to be able to create suitable documents (or	• Computers with internet access. • Access to computers with relevant software.

Lesson	Topic	Lesson type	Suggested activities	Resources
			onscreen forms) to capture information. This is particularly important in project management. For this activity, learners will research and create suitable *electronic* documents that they will share as a group to support their unit assessment. Each pair or group should be allocated a document to investigate and resource. Learners should be instructed to take only the key components of the examples provided to create a class version to be used as part of their projects. In addition to creating the document, they should prepare a short guide covering how to use the resource they have created. They can choose which software to use (for example, they could set up functionality in Microsoft Project or explore the functionality available in products such as Microsoft Excel – there are also free open-source products like ProjectLibre), but whatever they use should be available to all learners in the class. Once all templates are completed, learners should talk through their templates and guides with the class, explaining what the template is and what it's for (how to use it will be included in the guide). Any feedback	

Lesson	Topic	Lesson type	Suggested activities	Resources
			received during this process (including minor adjustments) should be observed and actioned. • **Homework:** To support the start of the next session, learners create a sheet showing the risks they face getting from home to school/college and the preventative measures in place to protect themselves from them.	
29-30	**C2 Typical project management processes** Risk and issue processes	IS C	• **Tutor-led presentation and discussion:** Ask learners how they assess everyday risks such as driving, taking public transport, or riding a bike, stairs, tasks like changing a lightbulb, using lifts, what they eat and drink. Ask learners which activities in the list are more likely to carry risk (learners could rank them in order of most to least risk). This discussion is designed to help learners understand that there is a risk in most things, although some activities carry less risk than others, and that assessing a risk factor will avoid crisis management later. For this reason, and particularly where an organisation's operations and activities could be affected, learners should understand that all project-related activities and resources (including running out of money, the	• Computers with internet access • Access to computers with relevant software

Lesson	Topic	Lesson type	Suggested activities	Resources
			availability of the right people with the right skills, sufficient time before project delivery) should be analysed for their risk probability. This ties into the previous session where learners considered contingency planning, which is the response to risk assessment. • **Small group activity:** Learners get back into their project groups and carry out a risk assessment on the project they have been using to support learning. They should create a risk list, ordered by risk factor (high to low). Learners should then discuss the identified risks with the class to see whether any have been omitted. • **Stretch:** Students who have completed the task should be given a risk assessment for a project and evaluate whether they think it clearly provides protection from all the risks identified.	
31	**C2 Typical project management processes** Execution and	IS C	• **Individual activity:** Learners carry out individual research to explore 10 top tips for successful project implementation. Each learner should create a checklist of their personal top 10.	• Computers with internet access.

Lesson	Topic	Lesson type	Suggested activities	Resources
	management processes for a project		The checklist should be shared with the class. Are there any exceptions on the lists? What are the common factors where learners agree? The tutor could consider compiling a final list for learners, which could be printed and placed on the classroom wall as an aide-memoir.	• Access to computers with relevant software.
32-40	**Learning aim B & C Assessment**	IA	• **Assignment 2:** A project document portfolio created from implementing either a 'live' or 'simulated' project using an appropriate methodology. Evidence will include planning, preparation, feasibility studies, requirements and records of processes carried out during the planning and execution of a project. Written or verbal reports should accompany the evidence where clarifications and justifications are required, and versioned document control should be applied. Learners should ensure that they choose a project methodology at the start of this assessment.	• Assignment brief. • Access to computers with internet access. • Access to computers with relevant software to support the assessment.
Learning aim D: Undertake the closure of a project by reflecting on the success of personal performance and the project outcome				

Lesson	Topic	Lesson type	Suggested activities	Resources
41-42	**D1 Lessons learned from implementing an IT project**	IS C	• **Individual activity:** Using the skills and behaviours audit they completed in the first session; learners reassess their skills and behaviours following the activity in the unit. What has improved? Which aspects need further improvement? Learners should use the same document to record their personal reflections, possibly using a different colour pen. • **Small group or paired activity:** Learners use the internet to find videos or other materials which would help them to improve any skills they have identified as needing improvement. Each group or pair should make a list and, after the activity, the lists should be combined by the tutor and shared on the class social media page. • **Tutor activity:** The tutor should also make recommendations to the learner's personal tutor if any areas for formal development have been identified (such as general timekeeping or personal commitment).	• Access to computers with internet access. • Original skills and behaviours audits completed in the first session.

Lesson	Topic	Lesson type	Suggested activities	Resources
43-45	**Assessment**	IA	• **Assignment 3:** A written report or presentation evaluating the outcome of the 'live' or 'simulated' project and reflecting on personal performance. The personal log that learners completed over the unit will be useful in supporting learners to reflect on their personal performance.	• Learners' personal logs. • Assignment brief. • Access to computers with internet access. • Access to computers with relevant software to support the assessment.